

INOLA NOV. GEN., A WEB-BUILDING
PISAURID (ARANEAE:PISAURIDAE) FROM NORTHERN
AUSTRALIA WITH DESCRIPTIONS
OF THREE SPECIES

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ABSTRACT

A new genus *Inola* and three new species. *I. amicabilis*, *I. cracentis* and *I. subtilis* are described. All 3 species build horizontal sheet webs and possess an onychium, small eyes of similar size and a large flat colulus.

INTRODUCTION

These spiders were found in north-eastern Queensland, just outside rainforest or in rainforest where the canopy was broken and more light than usual penetrated. The only other web-building pisaurid which has been described from Australia, *Dendrolycosa icadius* (Koch, 1876) n. comb., is found in open sclerophyll forest in mid-eastern and northern Queensland. It is probably a junior synonym of *D. fusca* Doleschall, 1859 from Amboina. The type of *D. fusca* is a penultimate female, however the epigyne is recognisable under the cuticle.

All specimens have been deposited in the Queensland Museum (QM). Measurements of the cephalothorax length (CL), abdomen length (AL) and of the leg segments and eyes were made with an ocular micrometer and converted to millimetres or left as ratios. Abbreviations, AME, ALE, PME, PLE and MOQ have been used for the anterior median, anterior lateral, posterior median, posterior lateral eyes and the median ocular quadrangle.

Inola gen. nov.

Large, slender long-legged spider which spins a sticky horizontal sheet web with a funnel retreat, back to a tree trunk or rock face (Figs. 2, 20). The spider runs on the top of the web. Onychium (Fig. 17) present; short scopula on anterior metatarsi. Anterior row of eyes straight, posterior row strongly recurved, all eyes small, about same size. Clypeus narrow, less than diameter AME. Labium slightly longer than wide; sternum

cordate, longer than wide. Promargin of chelicera with 3 teeth; retromargin with 3 teeth. Anterior lateral spinnerets longest and broadest; large flat colulus present (Fig. 4). Single row of trichobothria (Fig. 16) on tarsi of legs, none on palpal tarsus. Superior tarsal claws with 10-11 pectinations, inferior claw with 2 pectinations (Fig. 17). Superior lorum of pedicel composed of 4 sclerites, 2 median, 2 lateral. The posterior median sclerite with projection fitting into notch on anterior sclerite (Fig. 5). Cymbium long and slender.

The genus is most readily distinguishable from *Dendrolycosa*, the other web-building pisaurid that has been described from Australia, by the pattern of the anterior dorsal abdomen. In *Dendrolycosa* there is a marked dark stripe which terminates abruptly; in *Inola* there is a pale pattern outlining the cardiac region. '*Inola*' is an Aboriginal word meaning spider.

Inola amicabilis sp. nov.

HOLOTYPE: On sheet web, The Granites Track nr Home Rule, 35 km S. Cooktown, NE.Q., D. Joffe, V. Davies 16.xi.1974, 1 ♀, QM S860.

PARATYPES: The Granites Track nr Home Rule, NE.Q., D. Joffe, V. Davies, 16.xi.1974, 3 ♂, QM S861-863, 5 ♀, QM S864-868, 2 egg-sacs, QM S869; Intake Falls, Wallaby Ck nr Home Rule, NE.Q., D. Joffe, V. Davies, 17.xi.1974, 2 ♂, QM S870-871, 4 ♂ 5 ♀, QM S872; T. Tebble, V. Davies, 2.xi.1974 (moulted 21.xi.1974), 1 ♂, QM S873; Mt Finlay nr Bloomfield, NE.Q., V. Davies, J. Covacevich, 29.xi.1975, 1 ♀ 3 ♂, juvs., QM

S881; Summit, Mt Cook, Cooktown, NE.Q., R. Raven, V. Davies, 13.xi.1975, 2 ♀ 1 ♂, juvs, QM S882.

DESCRIPTION OF FEMALE:

CL 3.83, AL 6.83. Abdomen patterned dorsally (Fig. 1), pale venter with white mid-ventral line. Legs long 4.1.2.3. (Table 1); fourth metatarsus much longer than other metatarsi; femora and tibiae pale with darker bands, metatarsi and tarsi brown. Eyes, anterior width: posterior width: length is 60:70:47. MOQ anterior width: posterior width: length is 26:29:34. AME:ALE:PME:PLE is 10:13:11:12. Maxilla longer than wide, 1:0.43. Sternum slightly longer than wide, 1:0.90. Colulus much wider than long, 1:0.64.

♀ SPINE NOTATION: *First Leg*: femur, d3 (3rd spine small), p5r5; patella, d2p0r0; tibia, d2p2r2v5(6); metatarsus, d0p2r2v4, whorl of 5 small spines distally. *Second leg*: femur, d3p4(6)r5(6); patella, d2p0r0; tibia, d2p3(2)r2(3)v4(6); metatarsus, d0p2r2v4, whorl of 5 small spines distally. *Third leg*: femur, d3p4r5; patella, d2p0r0; tibia, d2p2r2v2; metatarsus, d0p1(2)r2v3(4), whorl of 5 small spines distally. *Fourth leg*: femur, d3p4(3)r3; patella, d2p0r0; tibia, d2p2r2v1; metatarsus, d0p2r2v5, whorl of 5 small spines distally.

EPIGYNUM (Figs. 6, 7, 8): The insemination duct enters near the base of the stalked spermatheca; the fertilization duct leaves just below this junction.

VARIATION IN LENGTH: CL 3.33–4.20; AL 4.58–6.83.

WEBS AND COCOON: The webs are usually placed one below the other in tiers against a tree trunk or rock face. The egg-sac is sub-circular, about 7 mm in diameter, loosely woven and covered in debris. It is picked up in the fangs and palps if the spider is disturbed. There were 72 eggs in one egg-sac.

TABLE 1: LEG MEASUREMENTS OF ♀ *I. AMICABILIS*

	Palp	I	II	III	IV
Femur	1.33	7.58	7.42	6.42	7.92
Patella	0.67	1.58	1.67	1.25	1.33
Tibia	1.00	7.25	6.83	5.42	6.42
Metatarsus	—	8.00	7.83	6.17	9.75
Tarsus	2.00	3.17	3.00	2.17	3.08
Total	5.00	27.58	26.75	21.43	28.50

DESCRIPTION OF MALE:

CL 3.50, AL 5.42. The male is about the same size as the female but has longer legs (I 36.00, II 34.09, III 27.00, IV 35.67). Coloration and pattern are similar to the female. Spination of the legs is very much the same except that in the male there are 4 ventral spines on the posterior tibiae.

PALP (Fig. 9, pl. 1, Figs. 18, 19): Median apophysis is large, in part sclerotized and in part membranous. The embolus is fine and curved; it lies hidden between the membranous part of the median apophysis and the sclerotized bar of the T-shaped conductor.

VARIATION IN LENGTH: CL 3.33–3.75, AL 4.70–5.67.

The type species *I. amicabilis* nov. is named from the 'friendly' behaviour of the sexes; the penultimate male joins the penultimate female on her web prior to their final moults.

Inola cracentis sp. nov.

HOLOTYPE: On sheet web under overhang of roadside bank, Boonjee, nr Malanda, Atherton Tableland, NE.Q., R. Raven, V. Davies, 5.iv.1978, 1 ♀, QM S874.

PARATYPES: Boonjee, nr Malanda, NE.Q., R. Raven, V. Davies, 5.iv.1978, 2 ♂, QM S875–876, ♀, juv., QM S877.

DESCRIPTION OF FEMALE:

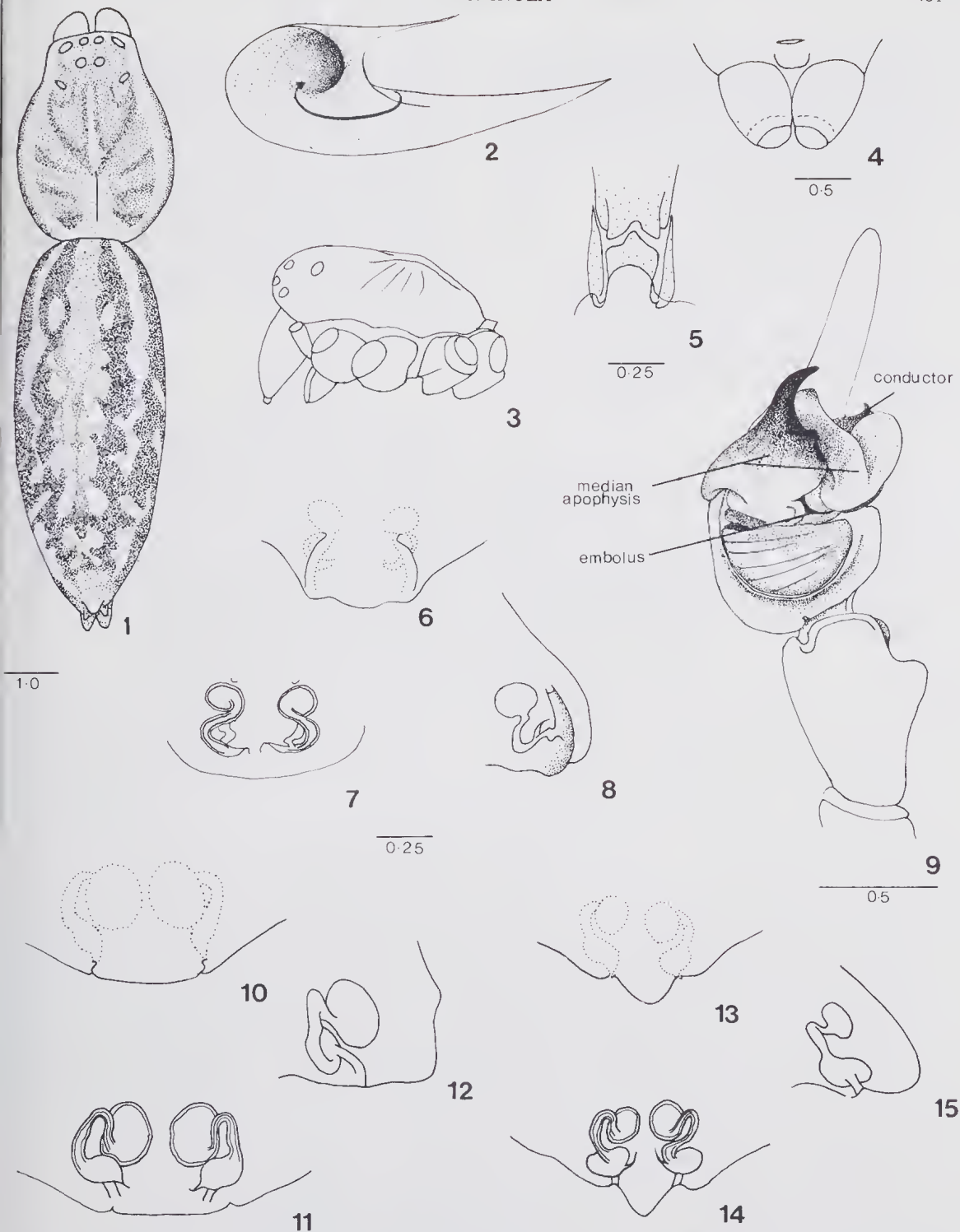
CL 4.25, AL 7.00. The spider is larger than *I. amicabilis* and has similar coloration and pattern. Legs long (I 30.41, II 29.52, III 24.50, IV 32.17). Eyes, anterior width: posterior width: length is 61:72:46. MOQ anterior width: posterior width: length is 29:32:35. AME:ALE:PME:PLE is 11:14:12:13. The disposal of spines on the legs is similar to *I. amicabilis* except that the small distal dorsal spine on femora is usually absent.

EPIGYNUM (Figs. 10, 11, 12): Spermatheca much larger than in *A. amicabilis*; insemination duct short.

VARIATION: Measurements of the paratype ♀: CL 4.58, AL 6.67.

DESCRIPTION OF MALES:

QM S876: CL 4.58, AL 6.33; QM S875: CL 4.17, AL 5.83. Colour, pattern and spination of the legs are similar to the female. Leg lengths, 4 = 1, 2, 3 (I 46.08, 40.83; II 44.42, 38.75; III 36.08; 29.92; IV 46.17, 40.75).



FIGS 1-9. *Inola amicabilis*. Fig. 1, ♀, dorsal. Fig. 2, sketch of web showing columnar support and funnel retreat. Fig. 3, cephalothorax, lateral; Fig. 4, anterior lateral spinnerets, colulus. Fig. 5, superior lorum of pedicel. Figs 6-8 epigynum. Fig. 6, external. Fig. 7, internal. Fig. 8, internal, lateral. Fig. 9, ♂, palp, ventral. Figs 10-12. ♀ *Inola cracentis* epigynum. Fig. 10, external. Fig. 11, internal. Fig. 12, internal, lateral. Figs 13-15. *Inola subtilis* epigynum. Fig. 13, external. Fig. 14, internal. Fig. 15, internal, lateral.

PALP (Pl. 2, Figs. 21, 22): The sclerotised part of the median apophysis has a different shape from that of *I. amicabilis*. The embolus is more easily seen, curving upwards above the membranous part of the median apophysis to be along the bar of the T-shaped conductor.

The specific name comes from the Latin '*cracens*' meaning graceful.

Inola subtilis sp. nov.

HOLOTYPE: On sheet web. Redlynch nr Cairns, NE.Q., R.R. Jackson, i.1980, 1 ♀, QM S878.

PARATYPES: Redlynch, NE.Q., R.R. Jackson, i.1980, 1 ♀, 1 juv., QM S879; Crystal Cascades, nr Cairns, NE.Q., R.R. Jackson, i.1980, 1 ♀, juvs. QM S880.

DESCRIPTION OF FEMALE:

CL 4·10, AL 8·30. This species is about the same size as *I. amicabilis* with similar colour and pattern. Legs long (I 28·34, II 27·42, III 22·10, IV 29·25). Eyes, anterior width: posterior width: length is 60:66:51. MOQ anterior width: posterior width: length is 27:30:32. AME:ALE:PME:PLE is 11:12:12:12. Disposal of spines on the legs is

similar to *I. cracensis* with 4 ventral spines on posterior tibiae.

EPIGYNUM (Figs. 13, 14, 15): Posterior edge is extended. Insemination ducts arise at the hind edge of the epigastrium.

VARIATION: CL 4·1–4·2, AL 7·1–8·3.

The specific name comes from the Latin '*subtilis*' meaning slender.

R.R. Jackson collected the spiders while studying the behaviour of the peculiar web-invading salticid, *Portia fimbriata* (Dol.), which he found on the webs of *I. subtilis*. No males were collected.

ACKNOWLEDGEMENTS

I am grateful for the support of the Interim Council of the Australian Biological Resources Study which funded the survey of rainforests during which *I. amicabilis* was collected. I wish to thank the following: Dr L. van der Hammen, Rijksmuseum van Natuurlijke Historie, Leiden where *Dendrolycosa fusca* was examined; Robert Raven for scanning electron micrographs; Sally Elmer for Fig. 2 and other members of the Queensland Museum for their support.

PLATE I

FIGS 16-17. *Inola cracentis*, S876, leg I. Fig. 16, tarsus, trichobothrium and hairs, short scale line 10 μ . Fig. 17, tarsal claws (hairs removed), scale line 110 μ .
FIGS 18-19. *Inola amicabilis*, S875, palp. Fig. 18, prolateral, scale line 100 μ . Fig. 19, retrolateral, scale line 125 μ . c, conductor, e, embolus, m.a. median apophysis.



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PLATE 2

FIG. 20. *Inola amicabilis* on web.

FIGS 21–22. *Inola cracentis* ♂ palp. Fig. 21, prolateral, scale line 50 μ .

Fig. 22, retrolateral, scale line 50 μ . Abbreviations as in Fig. 19.

